

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. A computer system comprising:  
a hierarchical memory system, including a first local storage, and a main storage; and  
a first memory access unit coupled to the hierarchical memory system capable of  
processing a plurality of memory access instructions that includes
  - (a) a first instruction that specifies a first address and a first value, wherein processing the first instruction by the first memory access unit causes the first value to be stored at a location in the first local storage that is associated with the first address, and
  - (b) a second instruction that specifies the first address, wherein processing of the second instruction by the first memory access unit after processing the first instruction is such that the first memory access unit complete processing of the second instruction after the first value is stored at a location in the main storage that is associated with the first address.

Claims 2-26. (cancelled)